09525228.031401

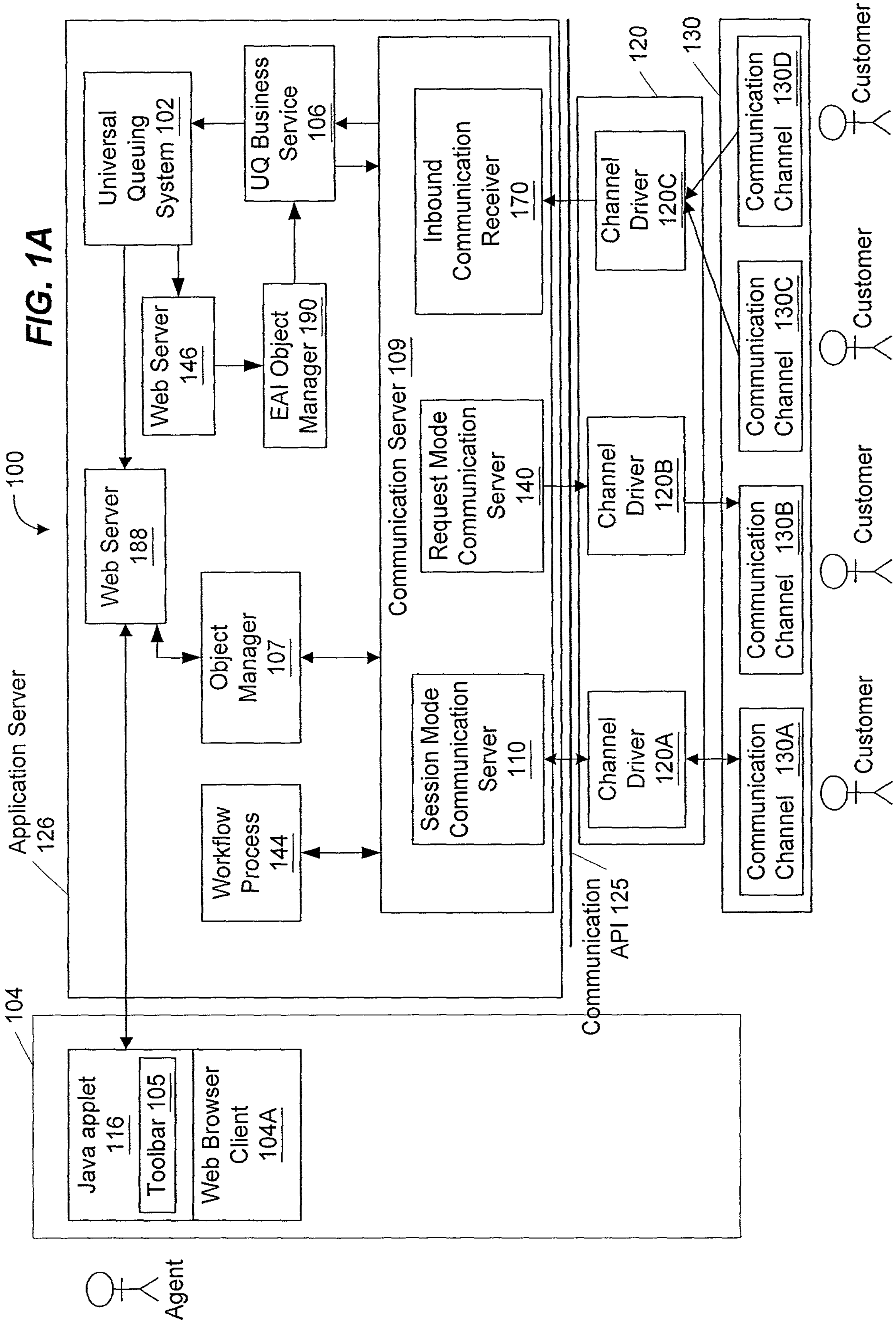
100
Application Server 126
Universal Queuing System 102
UQ Business Service 106
Web Server 146
EAI Object Manager 190
Web Server 188
Object Manager 107
Workflow Process 144
Communication Server 109
Inbound Communication Receiver 170
Request Mode Communication Server 140
Session Mode Communication Server 110
Communication API 125
120
Channel Driver 120C
Channel Driver 120B
Channel Driver 120A
130
Communication Channel 130D
Communication Channel 130C
Communication Channel 130B
Communication Channel 130A
Customer
Customer
Customer
Customer
104
Java applet 116
Toolbar 105
Web Browser Client 104A
Agent

FIG. 1A

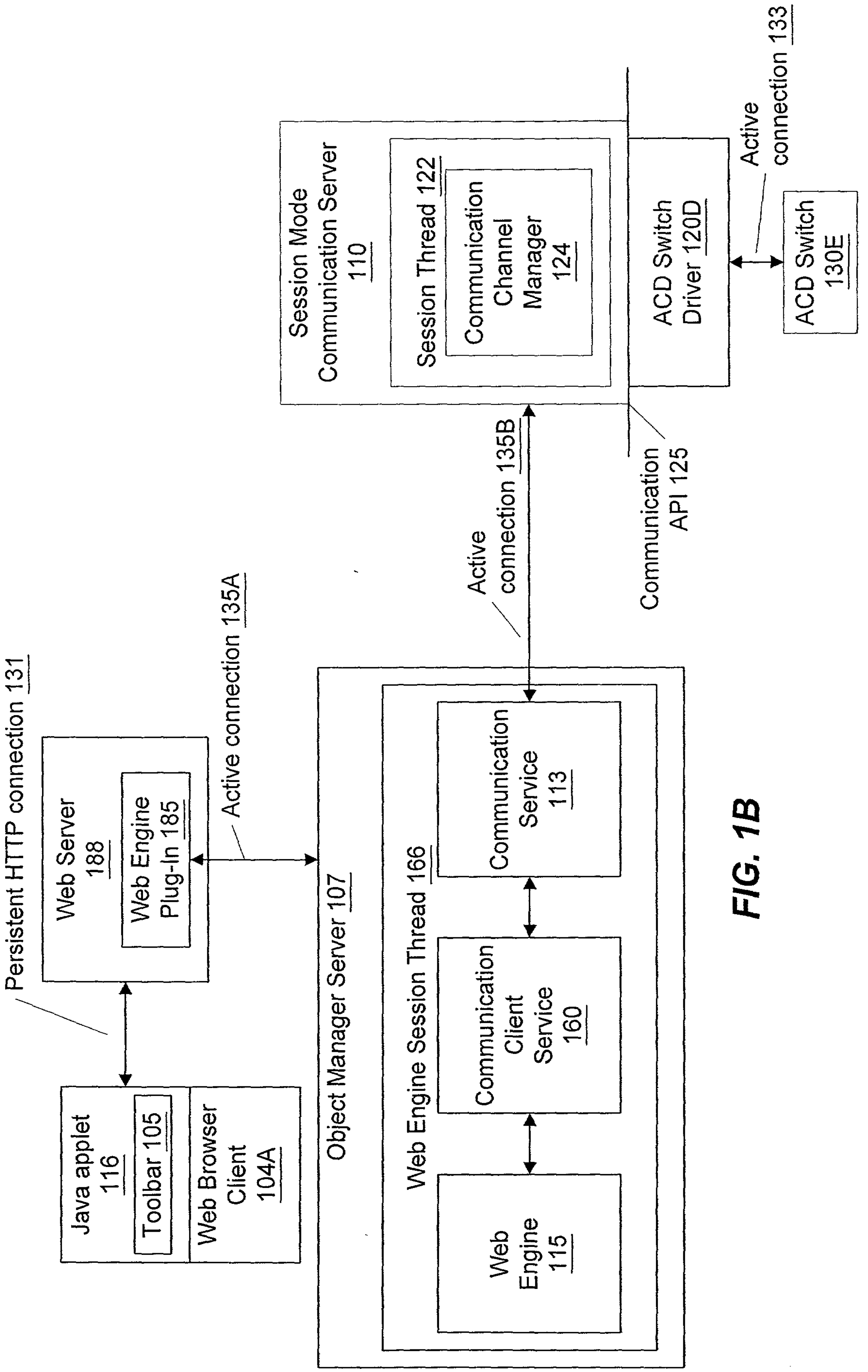
Java applet 116
Toolbar 105
Web Browser Client 104A
Persistent HTTP connection 131
Web Server 188
Web Engine Plug-In 185
Active connection 135A
Object Manager Server 107
Web Engine Session Thread 166
Web Engine 115
Communication Client Service 160
Communication Service 113
Active connection 135B
Session Mode Communication Server 110
Session Thread 122
Communication Channel Manager 124
Communication API 125
ACD Switch Driver 120D
Active connection 133
ACD Switch 130E

FIG. 1B

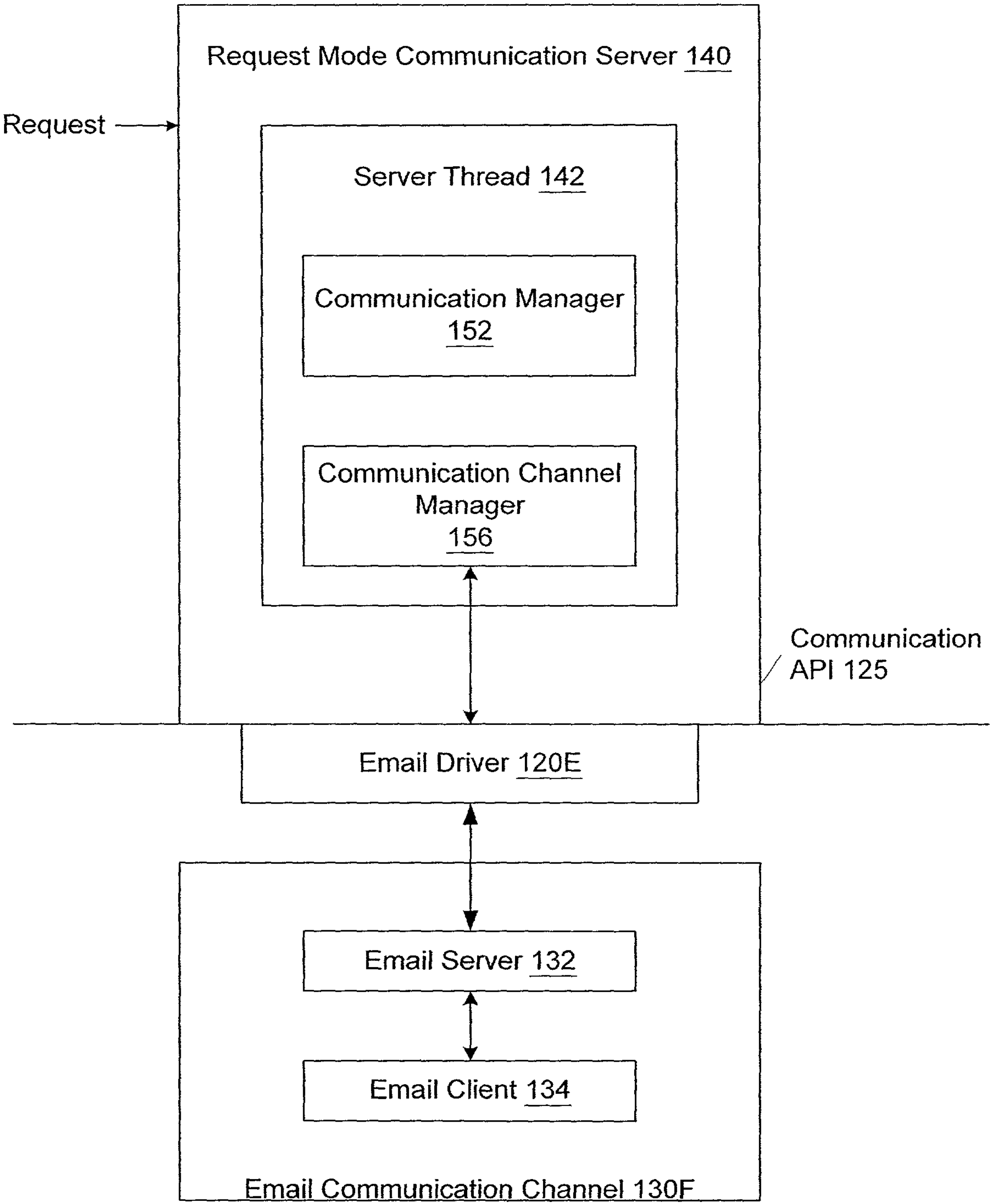
Request Mode Communication Server 140
Request
Server Thread 142
Communication Manager 152
Communication Channel Manager 156
Communication API 125
Email Driver 120E
Email Server 132
Email Client 134
Email Communication Channel 130F

FIG. 1C

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Attorney Docket No.: M-11530 US
First Inventor: Mingtse Chen
Title: Adaptive Communication Application Programming Interface

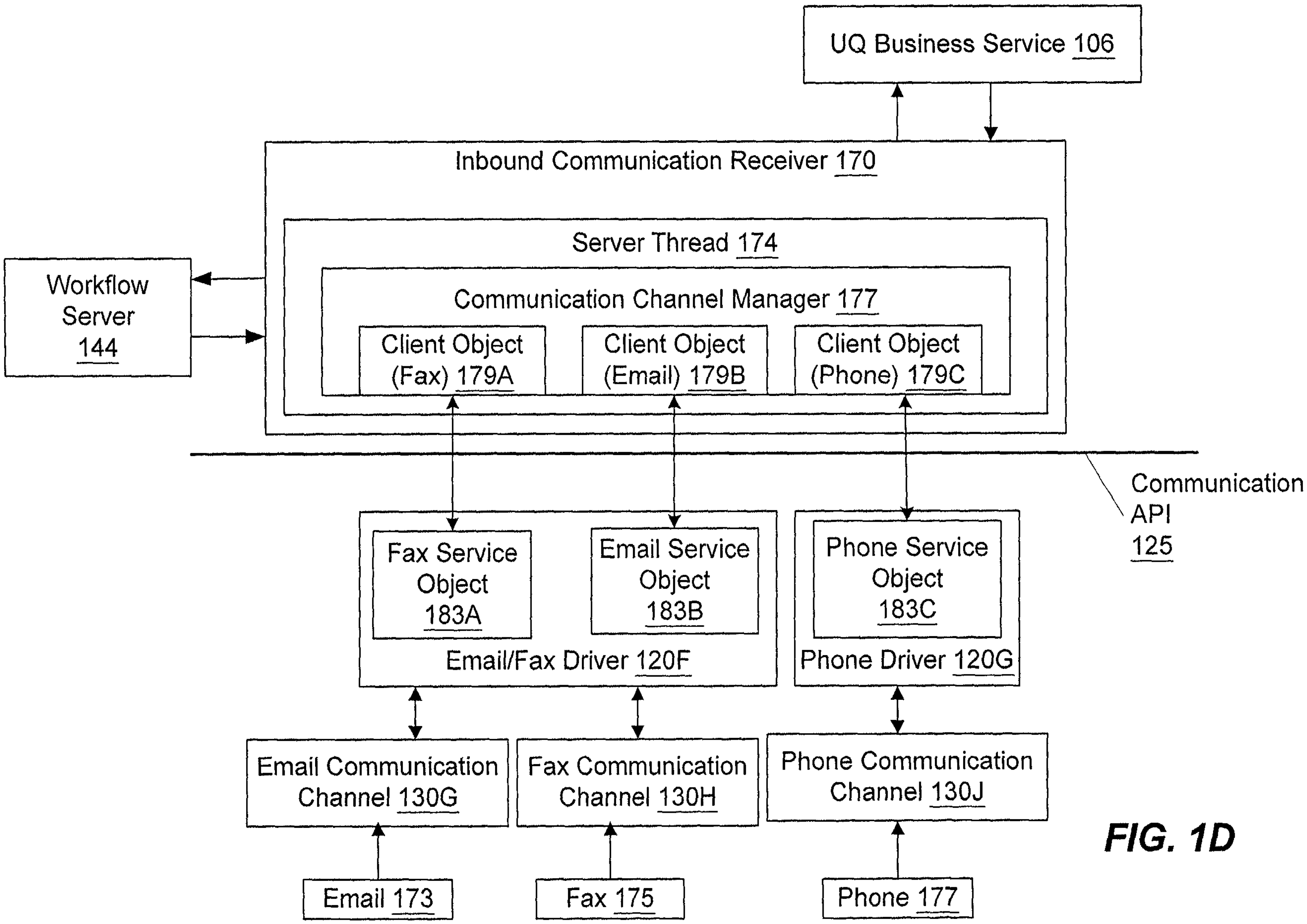
UQ Business Service 106
Inbound Communication Receiver 170
Server Thread 174
Communication Channel Manager 177
Client Object (Fax) 179A
Client Object (Email) 179B
Client Object (Phone) 179C
Workflow Server 144
Communication API 125
Fax Service Object 183A
Email Service Object 183B
Email/Fax Driver 120F
Phone Service Object 183C
Phone Driver 120G
Email Communication Channel 130G
Fax Communication Channel 130H
Phone Communication Channel 130J
Email 173
Fax 175
Phone 177

FIG. 1D

Attorney Docket No.: M-11530 US
First Inventor: Mingtse Chen
Title: Adaptive Communication Application Programming
Interface

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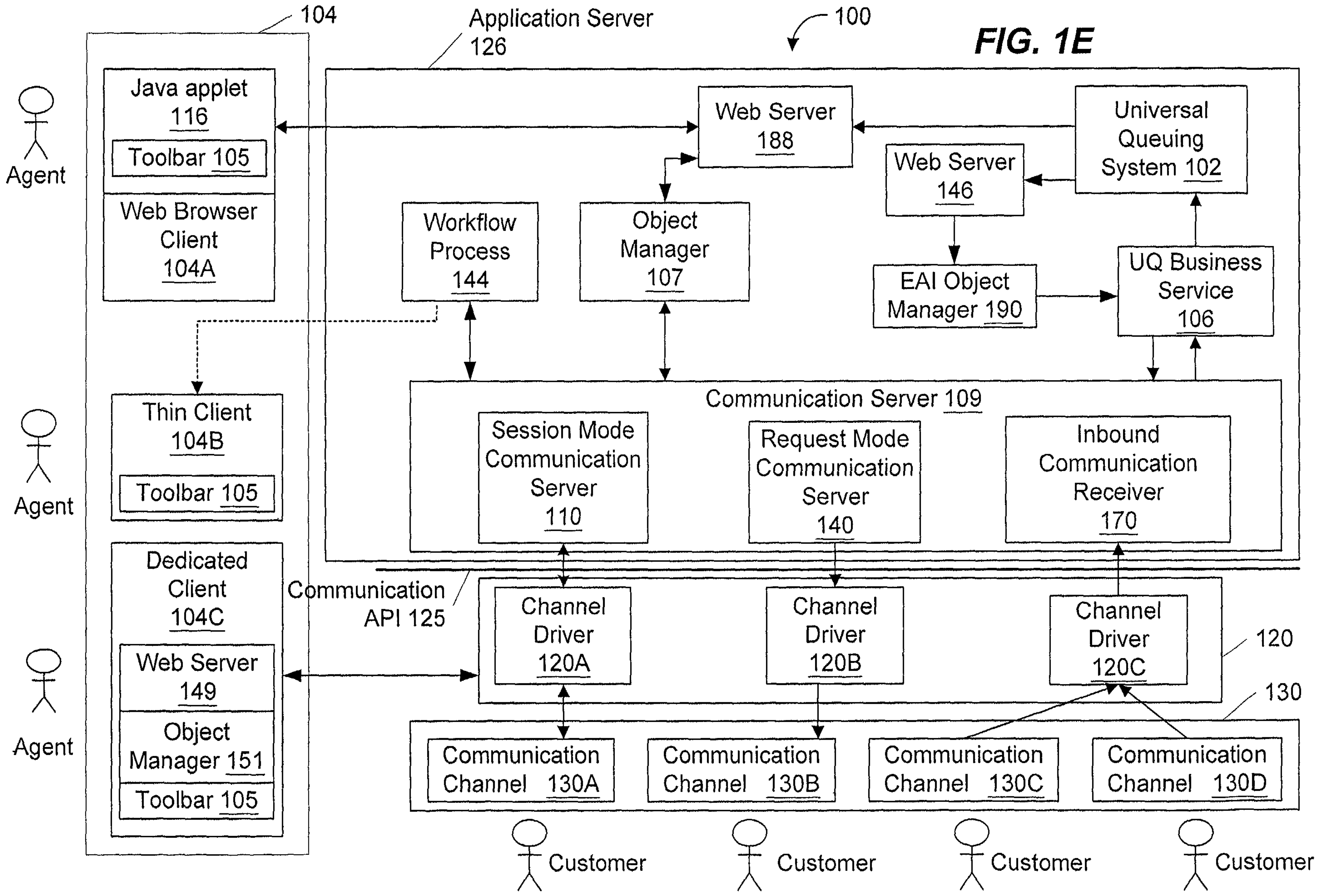
104
Application Server
126
100
Agent
Java applet
116
Toolbar 105
Web Browser
Client
104A
Agent
Thin Client
104B
Toolbar 105
Agent
Dedicated
Client
104C
Web Server
149
Object
Manager 151
Toolbar 105
Web Server
188
Universal
Queuing
System 102
Web Server
146
Workflow
Process
144
Object
Manager
107
EAI Object
Manager 190
UQ Business
Service
106
Communication Server 109
Session Mode
Communication
Server
110
Request Mode
Communication
Server
140
Inbound
Communication
Receiver
170
Communication
API 125
Channel
Driver
120A
Channel
Driver
120B
Channel
Driver
120C
120
130
Communication
Channel 130A
Communication
Channel 130B
Communication
Channel 130C
Communication
Channel 130D
Customer
Customer
Customer
Customer

FIG. 1E

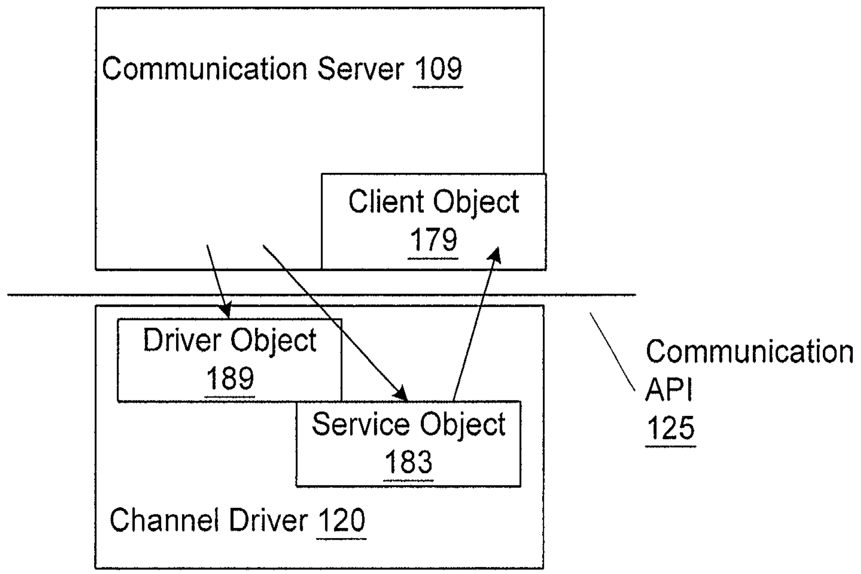
Communication Server 109
Client Object 179
Driver Object 189
Service Object 183
Channel Driver 120
Communication API 125

FIG. 1F

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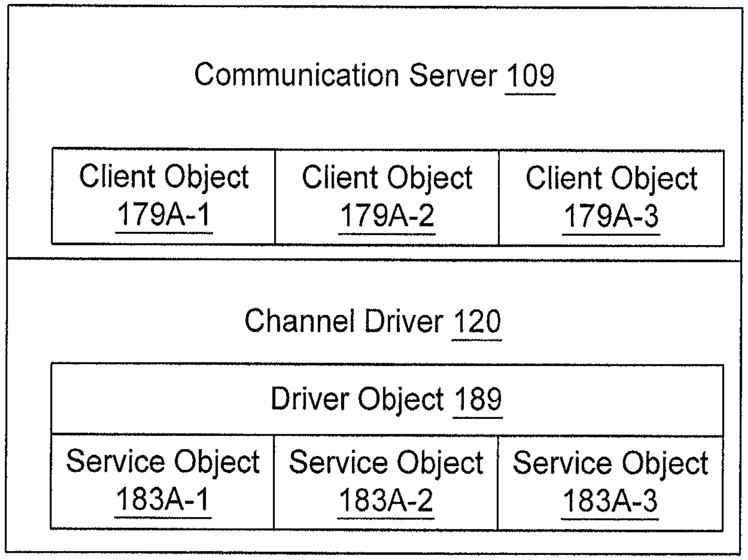
Communication Server 109
Client Object 179A-1
Client Object 179A-2
Client Object 179A-3
Channel Driver 120
Driver Object 189
Service Object 183A-1
Service Object 183A-2
Service Object 183A-3

FIG. 1G

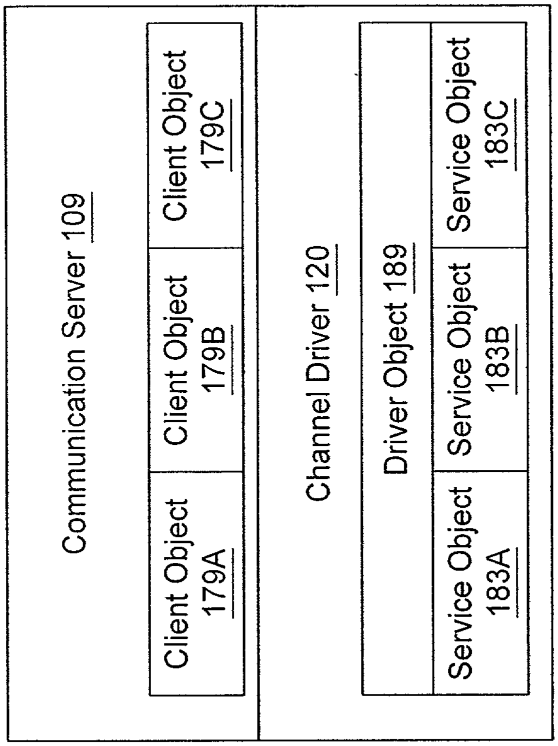
Communication Server 109
Client Object 179A
Client Object 179B
Client Object 179C
Channel Driver 120
Driver Object 189
Service Object 183A
Service Object 183B
Service Object 183C

FIG. 1H

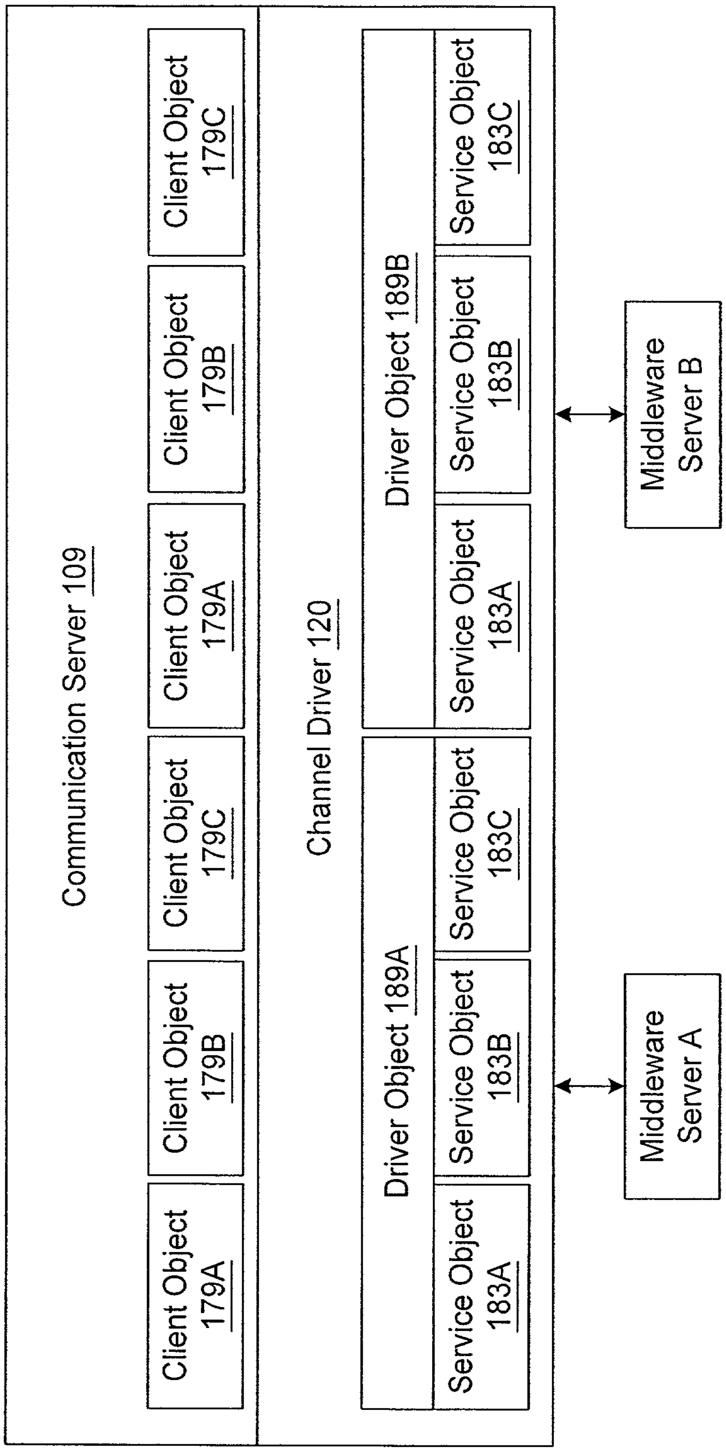
Communication Server 109
Client Object 179A
Client Object 179B
Client Object 179C
Client Object 179A
Client Object 179B
Client Object 179C
Channel Driver 120
Driver Object 189A
Service Object 183A
Service Object 183B
Service Object 183C
Driver Object 189B
Service Object 183A
Service Object 183B
Service Object 183C
Middleware Server A
Middleware Server B

FIG. 1I

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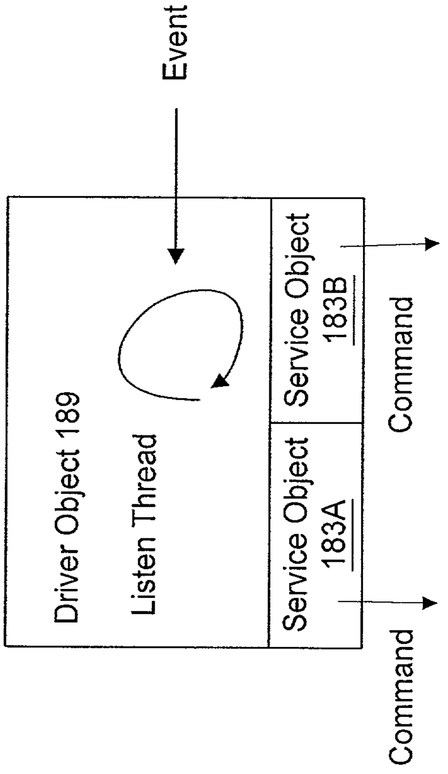
Event
Driver Object 189
Listen Thread
Service Object 183A
Service Object 183B
Command
Command

FIG. 1J

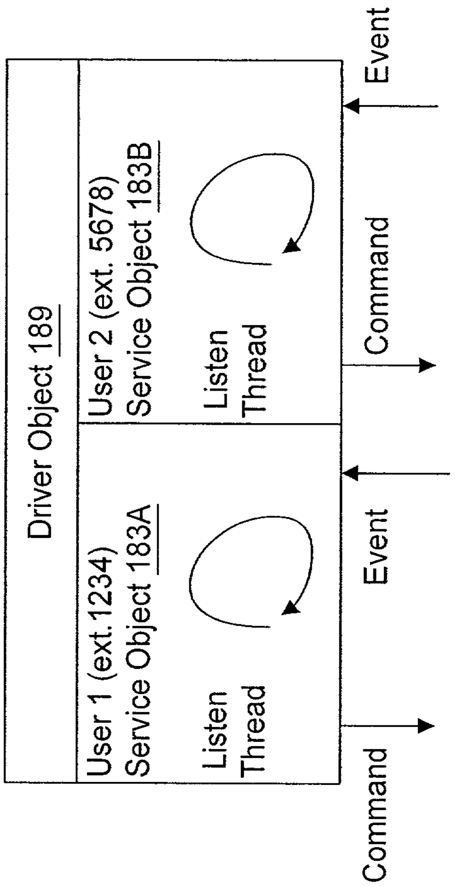
Driver Object 189
User 1 (ext.1234)
Service Object 183A
Listen Thread
User 2 (ext. 5678)
Service Object 183B
Listen Thread
Command
Event
Command
Event

FIG. 1K

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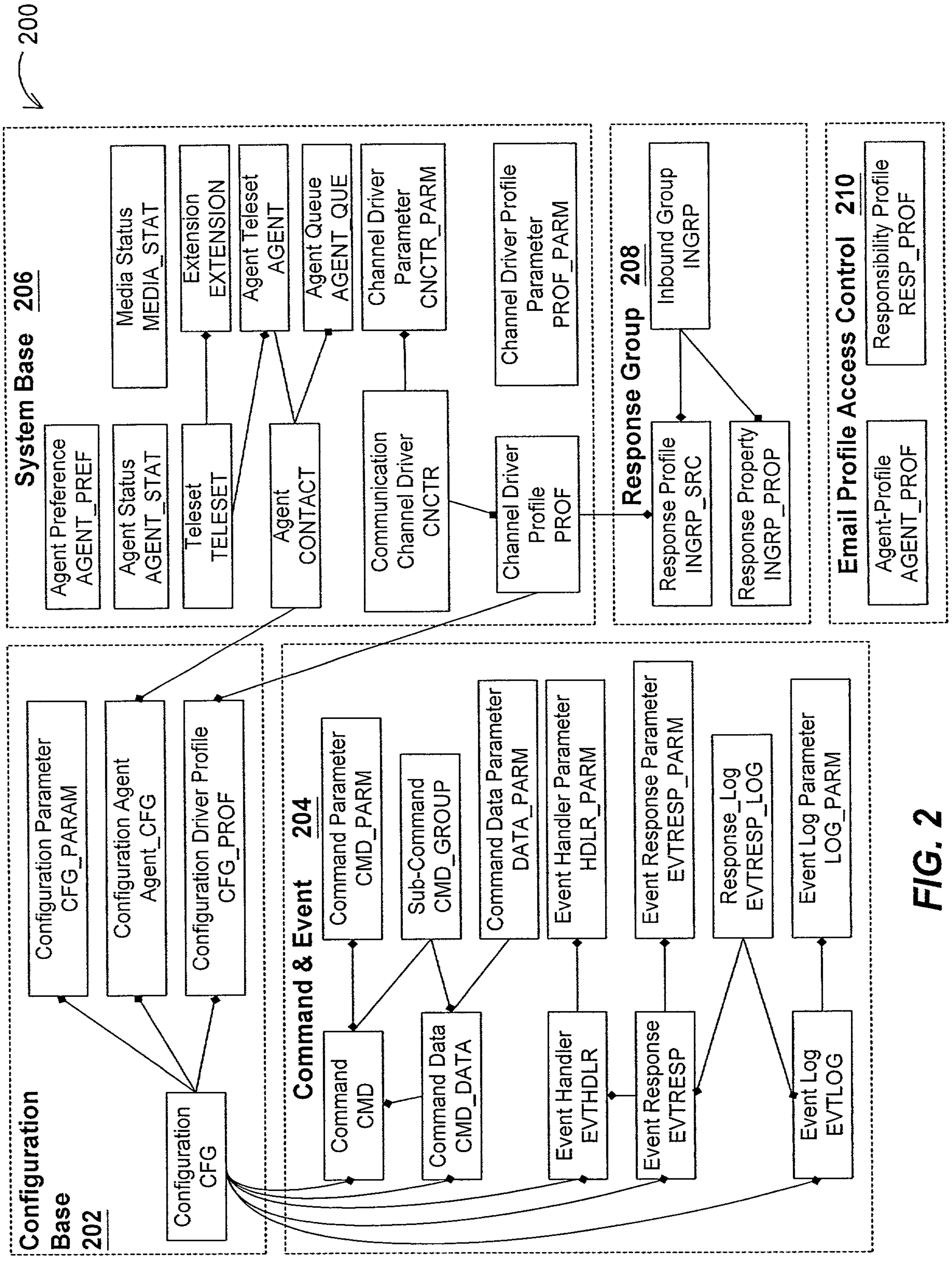
200
System Base 206
Agent Preference AGENT_PREF
Agent Status AGENT_STAT
Teleset TELESET
Agent CONTACT
Communication Channel Driver CNCTR
Channel Driver Profile PROF
Media Status MEDIA_STAT
Extension EXTENSION
Agent Teleset AGENT
Agent Queue AGENT_QUE
Channel Driver Parameter CNCTR_PARM
Channel Driver Profile Parameter PROF_PARM
Response Group 208
Response Profile INGRP_SRC
Response Property INGRP_PROP
Inbound Group INGRP
Email Profile Access Control 210
Agent-Profile AGENT_PROF
Responsibility Profile RESP_PROF
Configuration Base 202
Configuration CFG
Configuration Parameter CFG_PARAM
Configuration Agent Agent_CFG
Configuration Driver Profile CFG_PROF
Command & Event 204
Command CMD
Command Data CMD_DATA
Event Handler EVTHDLR
Event Response EVTRESP
Event Log EVTLOG
Command Parameter CMD_PARM
Sub-Command CMD_GROUP
Command Data Parameter DATA_PARM
Event Handler Parameter HDLR_PARM
Event Response Parameter EVTRESP_PARM
Response_Log EVTRESP_LOG
Event Log Parameter LOG_PARM

FIG. 2

FIG. 2a: CNCTR, Communication Channel Driver Table

Column Name	**Type**	**Length**	**Comments**
CNCTR_ID	Varchar	15	Identifier for channel driver channel driver CNCTR. CNCTR refers to software *connector*.
NAME	Varchar	75	Name of channel driver.
MEDIA_TYPE	Varchar	50	Media type. The value of this column can be expanded by customer.
LIB_NAME	Varchar	250	File name of channel driver DLL
INBOUND_FLG	Char	1	To indicate whether this channel driver supports inbound communications
OUTBOUND_FLG	Char	1	To indicate whether this channel driver supports outbound communications
CNCTR_MEDIA_STR	Varchar	100	The media string defined by the driver vendor, which will be used at run time to invoke the media service for the channel driver.
DESC_TEXT	Varchar	250	Comments
UQ_DRIVER_FLAG	Char	1	To indicate whether this channel driver is Universal Queuing type of channel driver

FIG. 2b: CNCTR_PARM, Channel Driver Parameter Table

Column Name	Type	Length	Comments
CNCTR_PARM_ID	Varchar	15	Identifier for channel driver parameter
NAME	Varchar	75	Name of channel driver parameter
DFLT_VALUE	Varchar	250	Default value of channel driver parameter
CNCTR_ID	Varchar	15	
REQUIRED_FLG	Char	1	To indicate whether this parameter must have a value at runtime

FIG. 2c: PROF, Communication Channel Driver Profile Table

Column Name	Type	Length	Comments
PROF_ID	Varchar	15	Identifier for channel driver profile
NAME	Varchar	75	Name of channel driver profile
CNCTR_ID	Varchar	15	

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FIG. 2d: PROF_PARM, Communication Channel Driver Profile Parameter Table

Column Name	Type	Length	Comments
PROF_PARM_ID	Varchar	15	Identifier for channel driver profile parameter
PROF_ID	Varchar	15	Channel Driver Profile ID
CNCTR_PARM_ID	Varchar	15	Parameter name ID
VALUE	Varchar	250	Override value of channel driver profile parameter.

FIG. 2e: AGENT_PREF, Agent Preference Table

Column Name	Type	Length	Comments
AGENT_PREF_ID	Varchar	15	Identifier for agent preference
EMP_ID	Varchar	15	
SETTING_NAME	Varchar	75	Preference name
SETTING_VALUE	Varchar	250	Preference value
SETTING_TYPE	Varchar	50	Preference type, e.g., “CTI” or “Communication”

FIG. 2f: AGENT_STAT, Agent Status Table.

Column Name	**Type**	**Length**	**Comments**
AGENT_STAT_ID	Varchar	15	Identifier for agent status
EMP_ID	Varchar	15	Employee ID
PROF_ID	Varchar	15	The channel driver profile ID. Agent has different status for different types of channel driver profiles.
NOT_READY_FLG	Char	1	Is agent not ready?
BUSY_FLG	Char	1	Is agent busy?

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FIG. 2g: MEDIA_STAT, Communication Media Status Table.

Column Name	Type	Length	Comments
MEDIA_STAT_ID	Varchar	15	Identifier for media status
EMP_ID	Varchar	15	Employee ID
PROF_ID	Varchar	15	The channel driver profile ID of the channel driver profile to which the status corresponds.
MEDIA_OBJECT_STR	Varchar	250	The string to represent the media object (e.g. the agent's extension number, or the sender's address of an email)
WORKING_SINCE_DT	Date Time	7	Work item starting time
WORK_ITEM_STR	Varchar	250	Work item ID

FIG. 2h: TELESET, Teleset Table.

Column Name	Type	Length	Comments
TELESET_ID	Varchar	15	Identifier for teleset
NAME	Varchar	30	Teleset Name
HOSTNAME	Varchar	70	Hostname of the computer connected to the Teleset.
COMMENTS	Varchar	250	

FIG. 2i: EXTENSION, Extension Table.

Column Name	Type	Length	Comments
EXTENSION_ID	Varchar	15	Identifier for extension
TELESET_ID	Varchar	15	Teleset ID
DN_EXT	Varchar	15	Extension Information
EXT_ACD_QUE	Varchar	30	This is the ACD queue to which this extension belongs.
EXT_TYPE	Varchar	30	ACD Extension or standard extension
AUTO_LOGIN_FLAG	Char	1	Indicate if we need to login to ACD for this extension at startup.

FIG. 2j: AGENT, Communication Agent Table.

Column Name	Type	Length	Comments
AGENT_ID	Varchar	15	Identifier for agent
PR_CFG_ID	Varchar	15	The primary configuration the agent uses.
EMP_ID	Varchar	15	Employee ID
ACTIVE_CFG_ID	Varchar	15	The currently active configuration.
ACTIVE_TELESET_ID	Varchar	15	The Teleset that the agent is currently using.

FIG. 2k: AGENT_TELSET, Communication Agent-Teleset Table

Column Name	Type	Length	Comments
AGENT_TELSET_ID	Varchar	15	Identifier for agent/teleset relationship
AGENT_ID	Varchar	15	Agent ID
TELESET_ID	Varchar	15	Teleset ID

FIG. 2l: AGENT_QUE, Agent-Queue Table.

Column Name	Type	Length	Comments
AGENT_QUE_ID	Varchar	15	Identifier for agent/queue relationship
AGENT_ID	Varchar	15	Agent ID
ACD_QUEUE_NAME	Varchar	30	ACD Queue
AUTO_LOGIN_FLAG	Char	1	Indicates need to login to ACD for this extension at startup.

FIG. 2m: AGENT_LIM, Communication Agent Limitation Table.

Column Name	Type	Length	Comments
AGENT_LIM_ID	Varchar	15	Identifier for agent limitation
AGENT_ID	Varchar	15	Agent ID
PROF_ID	Varchar	15	Channel Driver Profile ID that agent cannot use.

FIG. 2n: CFG, Communication Configuration Table.

Column Name	Type	Length	Comments
CFG_ID	Varchar	15	Identifier for configuration
NAME	Varchar	30	Configuration name
INGRP_FLAG	Char	1	To indicate whether this configuration is for inbound response group used in inbound communication receiver.
COMMENTS	Varchar	250	

FIG. 2o: CFG_PROF, Communication Configuration Channel Driver Profile Table

Column Name	Type	Length	Comments
CFG_PROF_ID	Varchar	15	Configuration/channel driver profile relationship
CFG_ID	Varchar	15	Configuration ID
PROF_ID	Varchar	15	Channel Driver Profile ID

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FIG. 2p: AGENT_CFG, Communication Agent - Configuration Table

Column Name	Type	Length	Comments
AGENT_CFG_ID	Varchar	15	Identifier for agent/configuration relationship
AGENT_ID	Varchar	15	Agent ID
CFG_ID	Varchar	15	Configuration ID

FIG. 2q: CFG_PARM, Communication Configuration Parameter Table.

Column Name	Type	Length	Comments
CFG_PARM_ID	Varchar	15	Identifier for configuration parameterand
CFG_ID	Varchar	15	Configuration ID
NAME	Varchar	50	Parameter Name
VALUE	Varchar	50	Parameter Value
ACTIVE_FLG	Char	1	Active flag is set if the value is valid

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FIG. 2r: CMD, Communication Command Table

Column Name	**Type**	**Length**	**Comments**
CMD_ID	Varchar	15	Identifier for command
CFG_ID	Varchar	15	Configuration ID
NAME	Varchar	70	Command name
TYPE	Varchar	50	Command type
PROF_ID	Varchar	15	The channel driver profile ID for the channel driver profile that this command is targeting.

FIG. 2s: CMD_PARM, Communication Command Parameter Table

Column Name	**Type**	**Length**	**Comments**
CMD_PARM_ID	Varchar	15	Identifier for command parameter
CMD_ID	Varchar	15	Command ID
PARAM_NAME	Varchar	100	Command parameter name
PARAM_VALUE	Varchar	100	Command parameter value

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FIG. 2t: CMD_DATA, Communication Command Data Table

Column Name	Type	Length	Comments
CMD_DATA_ID	Varchar	15	Identifier for command data
CFG_ID	Varchar	15	Command ID
NAME	Varchar	100	Command parameter name
Comment	Varchar	200	Comment (optional)

FIG. 2u: CMD_DATA_PARAM, Communication Command Data Parameter Table

Column Name	Type	Length	Comments
CMD_DATA_PARAM_ID	Varchar	15	Identifier for command data parameter
CMD_DATA_ID	Varchar	15	Identifier for command data
PARAM_NAME	Varchar	100	Command parameter name
PARAM_VALUE	Varchar	200	

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FIG. 2v: CMD_GROUP, Communication Command Group Table

Column Name	Type	Length	Comments
CMD_GROUP_ID	Varchar	15	Identifier for group of commands
SUB_CMD_ID	Varchar	15	Foreign key to command table
ORDER	Number	10	Default "0"

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FIG. 2w: EVTHDLR, Communication Event Handler Table

Column Name	Type	Length	Comments
EVTHDLR_ID	Varchar	15	Identifier for event handler
PROF_ID	Varchar	15	The channel driver profile ID for the channel driver profile from which this event originated.
NAME	Varchar	100	Event name
MEDIA_EVENT	Varchar	100	Identifier for event
ORDER	Number	10	Default "0"
EVT_RESP_ID	Varchar	15	Foreign key to event response table
Comment	Varchar	200	Comment (optional)

FIG. 2x: HDLR_PARM, Communication Event Handler Parameter Table

Column Name	Type	Length	Comments
HDLR_PARM_ID	Varchar	15	Identifier for event handler response
EVT_HDLR_ID	Varchar	15	Identifier for event handler
PARAM_NAME	Varchar	100	Event parameter name
PARAM_VALUE	Varchar	200	Event parameter value

FIG. 2y: EVTRESP, Communication Event Response Table

Column Name	Type	Length	Comments
EVTRESP_ID	Varchar	15	Identifier for event response
CFG_ID	Varchar	15	Identifier for configuration
NAME	Varchar	100	Event parameter name
COMMENT	Varchar	200	Comment (optional)

FIG. 2z: EVTRESP_PARM, Communication Event Response Parameter Table

Column Name	Type	Length	Comments
RESP_PARM_ID	Varchar	15	Identifier for event response parameter
EVTRESP_ID	Varchar	15	Identifier for event response
PARAM_NAME	Varchar	100	Event response parameter name
PARAM_VALUE	Varchar	200	Event response parameter value

FIG. 2aa: EVTLOG, Communication Event Log Table

Column Name	Type	Length	Comments
EVTLOG_ID	Varchar	15	Identifier for event log
CFG_ID	Varchar	15	Foreign key for configuration table
NAME	Varchar	100	Event parameter name
COMMENT	Varchar	200	Comment (optional)

FIG. 2bb: LOG_PARM, Communication Event Log Parameter Table

Column Name	Type	Length	Comments
LOG_PARM_ID	Varchar	15	Identifier for event log parameter
EVTLOG_ID	Varchar	15	Identifier for event log
PARAM_NAME	Varchar	100	Event log parameter name
PARAM_VALUE	Varchar	200	Event log parameter value

FIG. 2cc: EVTRESP_LOG Event Response – Event Log Table

Column Name	Type	Length	Comments
RESP_LOG_ID	Varchar	15	Identifier for response log
EVTRESP_ID	Varchar	15	Identifier for event response
EVTLOG_ID	Varchar	15	Identifier for event log
LOG_TYPE	Varchar	100	Type of EventLog declaration specified in EventResponse definition.

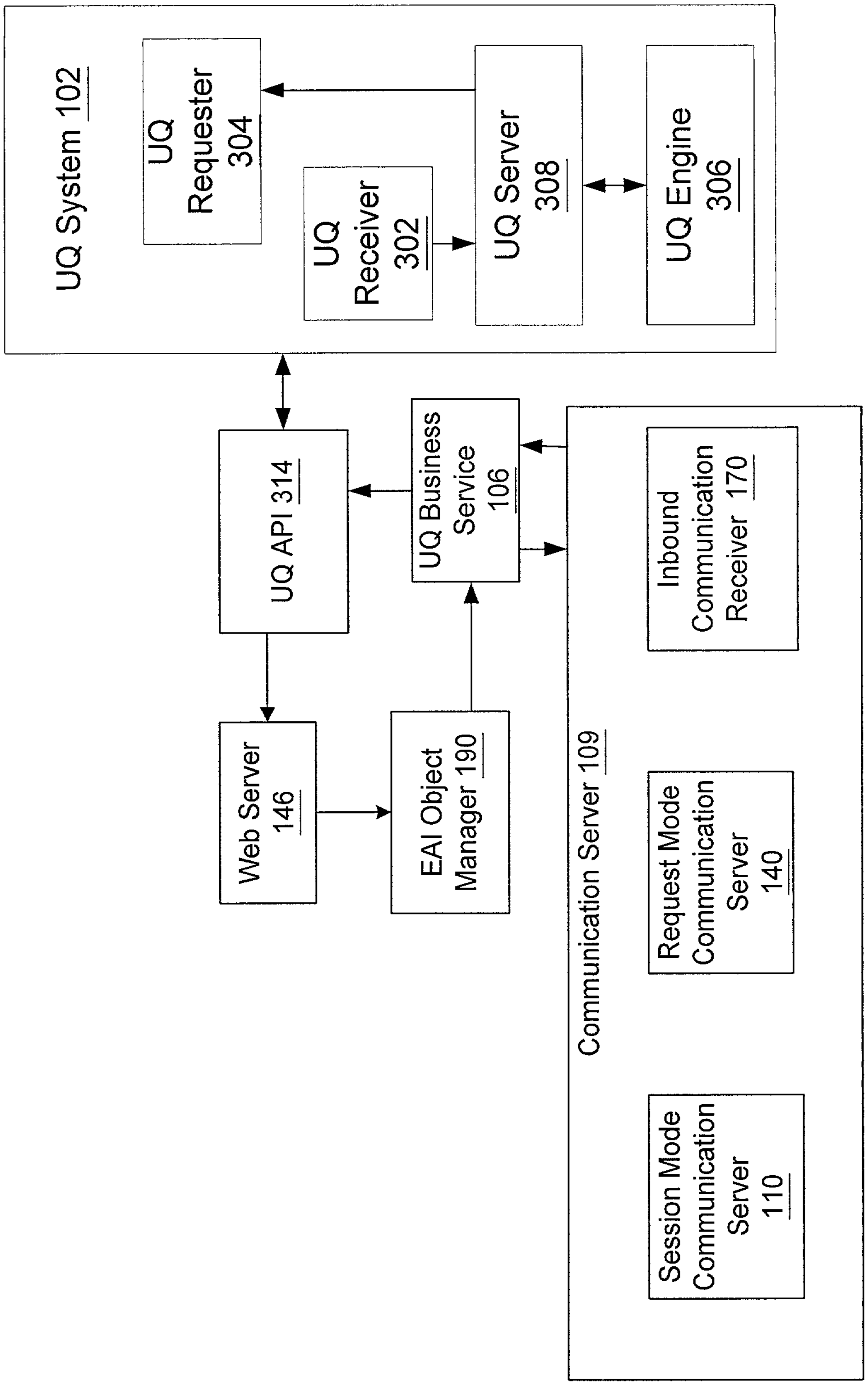
UQ System 102
UQ Requester 304
UQ Receiver 302
UQ Server 308
UQ Engine 306
UQ API 314
UQ Business Service 106
Web Server 146
EAI Object Manager 190
Communication Server 109
Inbound Communication Receiver 170
Request Mode Communication Server 140
Session Mode Communication Server 110

FIG. 3

FIG. 4A: TABLE UQ_CFG

Column_Name	Type	Length	Comments
NAME	Varchar	75	
SERVER_NAME	Varchar	75	
SERVER_PORT	Number	10	
RECEIVER_NAME	Varchar	75	
RECEIVER_PORT	Number	10	

FIG. 4B: TABLE UQ_CFG_PARAM

Column_Name	Type	Length	Comments
UQ_CFG_ID	Varchar	15	
NAME	Varchar	50	
VALUE	Varchar	50	

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FIG. 4C: TABLE UQ_ROUTE

Column_Name	Type	Length	Comments
NAME	VarChar	75	User defined name of the route
MEDIA_TYPE_CD	VarChar	30	Select from value of list. Possible values include “PBX”, “Web Chat”, “Web Collaboration”, “Fax”, “E-Mail”
ACTIVE_FLG	Char	1	Indicates wheter this route is active or not. If the route is not active, information for this route will not be passed to UQ engine.
PRIORITY_CD	Varchar	30	Lower the value higher the priority.
CAPACITY	Number	10	Maximum capacity of this route. Alarm should be generated when the number of queued item exceeds the CAPACITY
TIME_OUT_SCND	Number	10	Time in second in which when the work item is not server, the first escalation rule will be effective.

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FIG. 4D: TABLE UQ_ROUTE_PROP

Column_Name	Type	Length	Comments
UQ_ROUTE_ID	Varchar	15	
NAME	Varchar	75	Name of the property
VALUE	Varchar	75	Value of the property

FIG. 4E: TABLE UQ_ROUTE_ESCL

Column_Name	Type	Length	Comments
UQ_ROUTE_ID	Varchar	15	
NAME	Varchar	75	Name of the escalation rules
TIME_OUT_SCND	Number	10	Time in seconds in which the escalation rule will be timed out. Zero time means waiting indefinitely.
SEQ_NUM	Number	10	Order of escalation rules

FIG. 4F: TABLE UQ_RTESCL_RUL

Column_Name	Type	Length	Comments
ROUTE_ESCL_ID	Varchar	15	
SKILL_NAME	Varchar	50	Skill
SKILL_ITEM	Varchar	50	If skill item is null, it is a substitution of language from the work item data property.
EXPERTISE	Varchar	30	LOV, default Value

FIG. 4G: TABLE UQ_SKL_MAP

Column_Name	Type	Length	Comments
ROUTE_PROP_NAME	Varchar	75	
ROUTE_PROP_VALUE	Varchar	75	
SKILL_NAME	Varchar	75	
SKILL_VALUE	Varchar	75	

FIG. 4H: TABLE UQ_USER_MEDIA

Column_Name	Type	Length	Comments
USER_ID	Varchar	15	
MEDIA_TYPE_CD	varchar	30	
MAX_NUM_SESSIONS	Number	10	Maximum session allowed.

FIG. 4I: TABLE UQ_ROUTE_STS

Column_Name	Type	Length	Comments
ROUTE_ID	Varchar	75	
START_TS	Date Time		
END_TS	Date Time		
SOURCE_NAME	Varchar	75	Either the route name
AVG_WAIT_TM	Number	10	Waiting time during the given period
AVG_HANDLE_TM	Number	10	Handling time during the period
NUM_ABANDONED_REQS	Number	10	Number of abandon request
AVG_ABANDONING_TM	Number	10	
LONGEST_WAIT_TM	Number	10	Longest waiting time in seconds
AVAIL_USER_PCT	Number	10	Percentage of available agents
AUX_WORK_USER_PCT	Number	10	Percentage of auxwork agents
TOTAL_NUM_WORKITEMS	Number	10	Total number of agent if each agent handle only one work item
TOTAL_NUM_UNASSIGNED_WORKITEM	Number		
TOTAL_NUM_DELIVERED_WORKITEM	Number		
TOTAL_NUM_SERVICE_LEVEL_WORKITEM	Number		
Comments	Varchar	250	

FIG. 4J: TABLE UQ_MEDIA_STS

Column_Name	Type	Length	Comments
MEDIA_TYPE_CD	Varchar	30	
START_TS	Date Time		
END_TS	Date Time		
SOURCE_NAME	Varchar	75	Either the route name
AVG_WAIT_TM	Number	10	Waiting time during the given period
AVG_HANDLE_TM	Number	10	Handling time during the period
NUM_ABANDONED_REQS	Number	10	Number of abandon request
AVG_ABANDONING_TM	Number	10	
LONGEST_WAIT_TM	Number	10	Longest waiting time in seconds
AVAIL_AGENT_PCT	Number	10	Percentage of available agents
AUX_WORK_AGENT_PCT	Number	10	Percentage of auxwork agents
TOTAL_NUM_WORKITEMS	Number	10	Total number of agent if each agent handle only one work item
TOTAL_NUM_UNASSIGNED_WORKITEM	Number		
TOTAL_NUM_DELIVERED_WORKITEM	Number		
TOTAL_NUM_SERVICE_LEVEL_WORKITEM	Number		
Comments	Varchar	250	

FIG. 4K: TABLE UQ_AGENT_STS

Column_Name	Type	Length	Comments
AGENT_ID	Varchar	15	
START_TS	Date Time	7	
END_TS	Date Time	7	
CONTACT_ID	Varchar	15	
AVAIL_PCT	Number		Percentage available
BUSY_PCT	Number		Percentage busy
AUX_WORK_PCT	Number		Percentage auxwork
NUM_COMM_ITEM_SRVD	Number		Number of work item served
Comments	Varchar	250	

FIG. 4L: TABLE UQ_ERR_LOG

Column_Name	Type	Length	Comments
Name	DateTime	7	
TYPE_CD	Varchar	30	Either alarm or error
Severity	Varchar	30	
ERROR_CODE	Varchar	10	Alarm code or error code
MSG_DESC	Varchar	250	Template for message

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FIG. 4M: S_JOURNAL

Column_Name	Type	Length	Comments
WORK_ITEM_ID	Varchar	250	Work item ID
ROUTE_NAME	Varchar	75	The name of the route. Use the actual name instead of ID because the nature of the route could be changing from time to time.

Fig. 4n: S_JOURNAL_WORKITEM_PROPERTY

Column_Name	Type	Length	Comments
JOURNAL_ID	Varchar	15	
Name	Varchar	75	Name of the property
Value	Varchar	75	Value of the property

Fig. 4o: S_JOURNAL_ESC_HIST

Column_Name	Type	Length	Comments
JOURNAL_ID	Varchar	15	
ESC_STEP_NAME	Varchar	75	
START_TIME	Date Time		Start time
END_TIME	Date Time		
RESULT	Varchar	75	

09625626.053101

Fig. 4p: S_JOURNAL_STATE_HIST

Column_Name	Type	Length	Comments
JOURNAL_ID	Varchar	15	
USERID	Varchar	15	
START_TIME	Date Time		Start time
END_TIME	Date Time		
AGENTSTATE	Varchar	50	
REASON	Varchar	50	

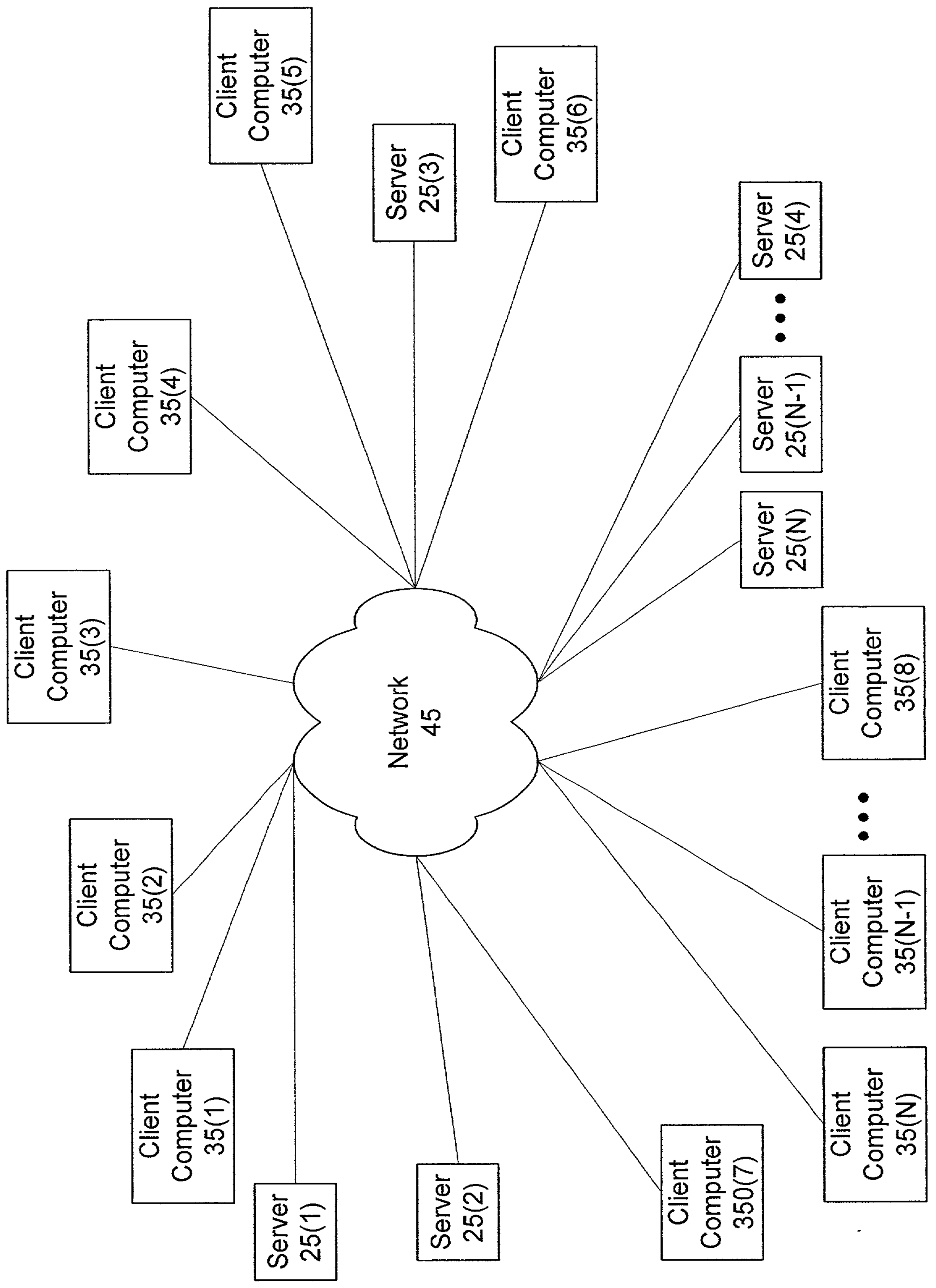
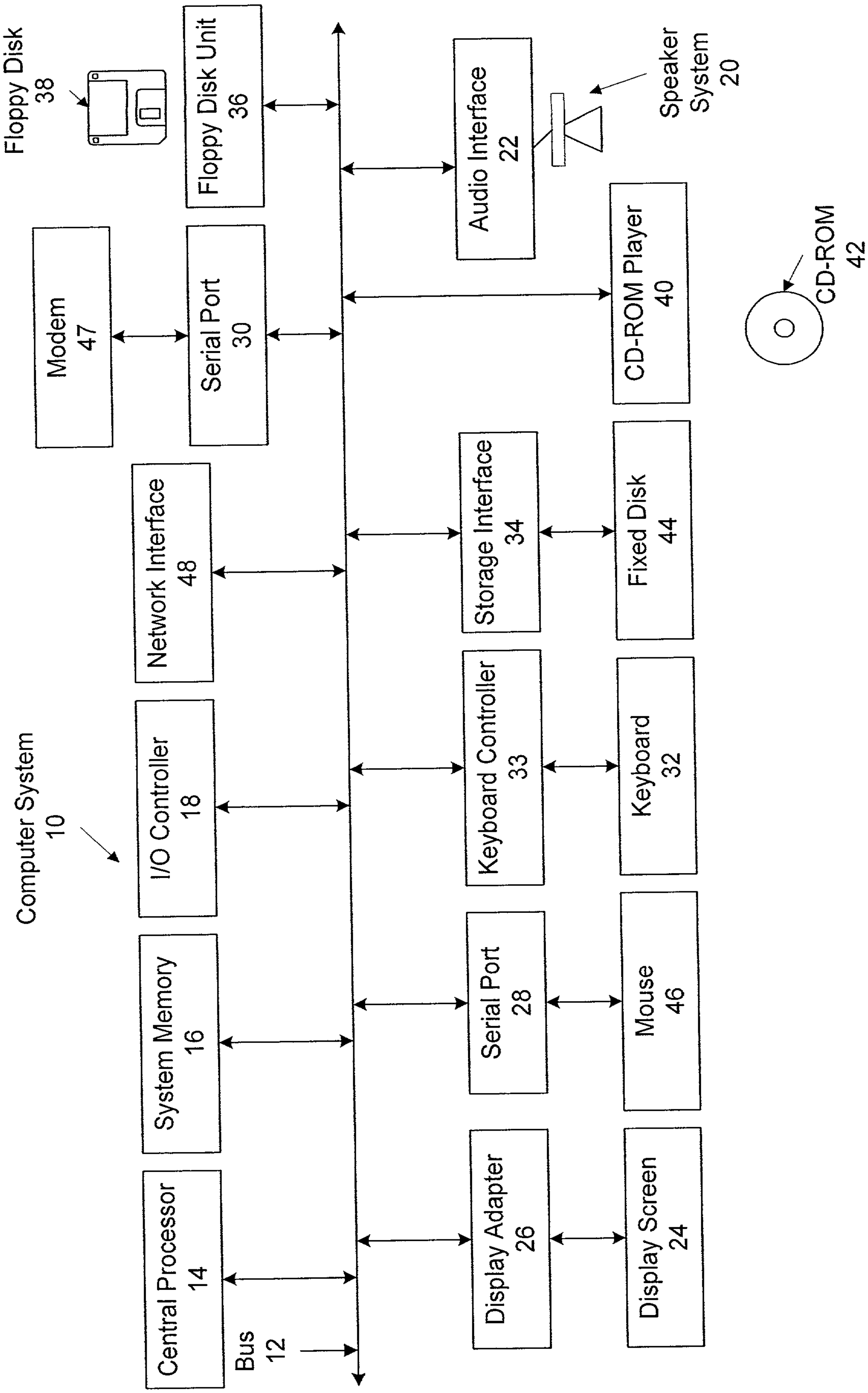

Client Computer 35(5)
Server 25(3)
Client Computer 35(6)
Client Computer 35(4)
Server 25(4)
Server 25(N-1)
Server 25(N)
Client Computer 35(3)
Network 45
Client Computer 35(8)
Client Computer 35(2)
Client Computer 35(N-1)
Client Computer 35(1)
Client Computer 35(N)
Server 25(1)
Server 25(2)
Client Computer 350(7)

FIG. 5

Attorney Docket No.: M-11530 US
First Inventor: Mingtse Chen
Title: Adaptive Communication Application Programming Interface



Floppy Disk 38
Floppy Disk Unit 36
Audio Interface 22
Speaker System 20
Modem 47
Serial Port 30
CD-ROM Player 40
CD-ROM 42
Network Interface 48
Storage Interface 34
Fixed Disk 44
Computer System 10
I/O Controller 18
Keyboard Controller 33
Keyboard 32
System Memory 16
Serial Port 28
Mouse 46
Central Processor 14
Display Adapter 26
Display Screen 24
Bus 12

FIG. 6

09538232 .071501

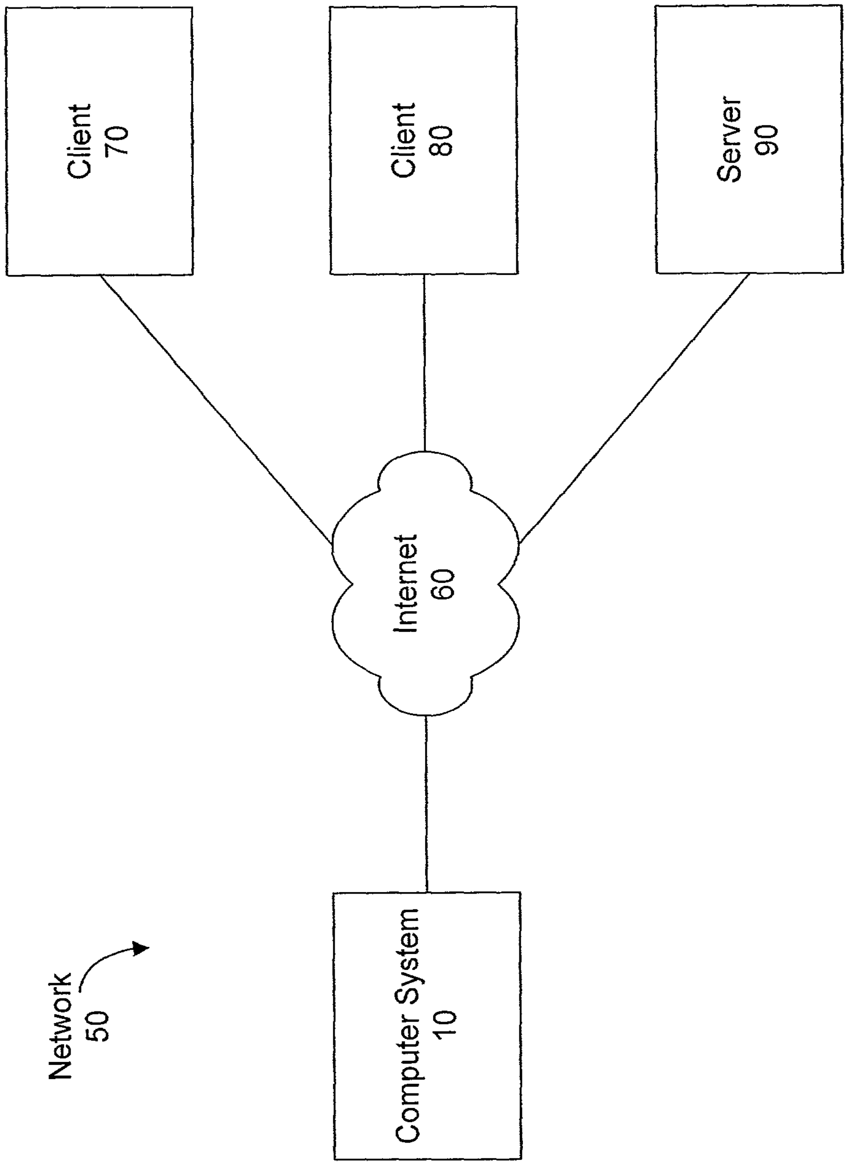

Client
70
Client
80
Server
90
Internet
60
Network
50
Computer System
10

FIG. 7